

P **Mentha arvensis var. piperascens**

Common Name(s)

Cormint, Field Mint, Japanese Mint

How Used

G

| Chemical Plant Part | | Low PPM | High PPM | StdDev | Reference | Citation |
|---------------------|---------------------------------|---------------|----------|--------|----------------------------|----------|
| 0 | (+)-1,2-EPOXYNEOMENTHYL-ACETATE | Leaf | -- | 5000 | | |
| 0 | (+)-8-ACETOXY-CARVONE | Essential Oil | -- | -- | Jim Duke's personal files. | |
| 2 | (+)-CARVONE | Essential Oil | -- | -- | Jim Duke's personal files. | |
| 0 | (+)-ISOMENTHONE | Leaf | 240 | 7062 | 1.2644952641479401 | |
| 0 | (+)-MENTHOFURAN | Leaf | 32 | 32 | -0.7587175787128734 | |
| 0 | (+)-MENTHYL-ACETATE | Leaf | 300 | 1900 | | |
| 0 | (+)-NEOMENTHOL | Leaf | 1100 | 2200 | 0.9156775285682353 | |
| 0 | (+)-OCTAN-3-ONE | Leaf | 9000 | 27000 | | |
| 0 | (+)-PIPERITENONE | Leaf | 400 | 700 | | |
| 1 | (+)-PIPERITENONE-OXIDE | Leaf | -- | 2900 | -1.0692702191867607 | |

| Chemical Plant Part | | Low PPM | High PPM | StdDev | Reference | Citation |
|---------------------|------------------------|---------------|----------|--------|----------------------|------------------------------------------------------------------------------------|
| 0 | (+)-PIPERITONE | Leaf | -- | 1400 | | |
| 4 | (+)-PULEGONE | Leaf | 1100 | 8400 | 1.6412173114963589 | |
| 4 | (+)-PULEGONE | Plant | -- | 25455 | 1 | |
| 3 | (-)-BORNEOL | Leaf | 500 | 600 | | |
| 0 | (-)-CARVONE | Essential Oil | -- | -- | | Jim Duke's personal files. |
| 0 | (-)-CARVONE | Leaf | -- | 7300 | 0.8387456988737643 | |
| 0 | (-)-LIMONENE | Leaf | -- | 1600 | 0.6735227011412723 | |
| 0 | (-)-LINALOOL | Leaf | 3900 | 4000 | 0.737154384403507 | |
| 0 | (-)-LINALYL-ACETATE | Leaf | -- | -- | -1 | |
| 4 | (-)-MENTHOL | Leaf | 1500 | 9600 | -0.13664468500079888 | |
| 0 | (-)-MENTHOL-ACETATE | Leaf | 10 | 32 | | |
| 2 | (-)-MENTHONE | Leaf | 500 | 4400 | -0.41193606418331424 | |
| 0 | (-)-PIPERITENONE-OXIDE | Leaf | 3330 | 10595 | | |
| 1 | (-)-PIPERITONE | Leaf | 240 | 7700 | 1 | |
| 67 | 1,8-CINEOLE | Leaf | -- | -- | | Jim Duke's personal files. |
| 0 | 1-P-MENTHEN-3-ONE | Plant | -- | -- | | Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952. |

| Chemical Plant Part | | Low PPM | High PPM | StdDev | Reference | Citation |
|---------------------|---------------------------------------------------------------------|---------------|----------|--------|---------------------|----------------------------------------------------------------------------------------------------------------------------|
| 0 | 3',4',5,7-TETRAHYDROXY-FLAVONE-7-ALPHA-L-RHAMNOSYL-BETA-D-GLUCOSIDE | Shoot | -- | -- | | Jim Duke's personal files. |
| 0 | 3',5,7-TRIHYDROXY-4'-METHOXY-FLAVONE-O-BETA-D-GLUCOSIDE | Shoot | -- | -- | | Jim Duke's personal files. |
| 0 | 3(5',5'-DIMETHYL-TETRAHYDROFURAN-2'-YL)-BUT-CIS-2-EN-1-OL | Plant | -- | 1.4 | | |
| 0 | 3(5',5'-DIMETHYL-TETRAHYDROFURAN-2'-YL)-BUT-CIS-2-EN-1-OL | Essential Oil | 1.4 | 1.4 | -0.7074110008631054 | Jim Duke's personal files. |
| 0 | 3-METHYLPENTANOL | Plant | -- | -- | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | 4',5,7-TRIHYDROXY-FLAVONE-7-ALPHA-L-RHAMNOSYL-BETA-D-GLUCOSIDE | Shoot | -- | -- | | Jim Duke's personal files. |
| 0 | 4',5,7-TRIHYDROXY-FLAVONE-O-BETA-D-GLUCOSIDE | Shoot | -- | -- | | Jim Duke's personal files. |
| 0 | ACACETIN-7-O-BETA-D-GLUCOSIDE | Shoot | -- | -- | | Jim Duke's personal files. |
| 16 | ACETIC-ACID | Plant | -- | -- | | Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952. |

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|---------------------|------------------------------------|---------------|----------|--------|----------------------|----------------------------------------------------------------------------------------------------------------------------|
| 0 | ACETYLMENTHOL | Plant | -- | -- | | Chemical Constituents of Oriental Herbs (3 diff. books) |
| 0 | ALPHA,BETA-HEXENIC-ACID | Plant | -- | -- | | Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952. |
| 0 | ALPHA,GAMMA-HEXENYL-PHENYL-ACETATE | Plant | -- | -- | | Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952. |
| 28 | ALPHA-PINENE | Plant | 10 | 300 | -0.26916907964228254 | |
| 0 | ALPHA-THUJENE | Plant | -- | -- | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 7 | ANISALDEHYDE | Shoot | -- | -- | | Jim Duke's personal files. |
| 0 | BETA-CAR-3-ENE | Essential Oil | -- | -- | | Jim Duke's personal files. |
| 0 | BETA-CARYOPHYLLENE | Leaf | -- | 700 | 0.007903496850210601 | |

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|---------------------|-------------------|------------|-------------|--------|-----------------------|----------------------------------------------------------------------------------------------------------------------------|
| 3 | BETA-PHELLANDRENE | Plant | -- | -- | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 13 | BETA-PINENE | Plant | 10 | 1445 | 1.124729385882718 | |
| 13 | BETA-PINENE | Leaf | -- | 800 | 0.7508636062406463 | |
| 28 | CALCIUM | Plant | 13500 | 13500 | -0.009562051564718019 | Suzuki, A., Morimoto, I., and Okitsu, T., Elution of Metals from Crude Drugs, Shoykugaku Zasshi 36(3):190-195. |
| 9 | CAMPHENENE | Plant | -- | -- | | Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952. |
| 1 | CAPROIC-ACID | Plant | -- | -- | | Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952. |

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|---------------------|-----------------|----------------|----------|--------|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| 0 | CARVOMENTHONE | Plant | -- | -- | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 19 | CARVONE | Essential Oil | -- | -- | Duke, J. A. | Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705. |
| 19 | CARVONE | Leaf | 8100 | 26000 | 5.048754540985525 | |
| 31 | CARYOPHYLLENE | Plant | -- | -- | Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952. | |
| 0 | CHLOROPHYLL-A | Tissue Culture | -- | -- | | Jim Duke's personal files. |
| 0 | CHLOROPHYLL-B | Tissue Culture | -- | -- | | Jim Duke's personal files. |
| 0 | CINEOLE | Leaf | 40 | 1785 | -0.6151264776039638 | |
| 0 | CIS-ISOPULEGONE | Leaf | -- | -- | | Jim Duke's personal files. |

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|---------------------|--------------------------------|------------|---------------------|--------|--------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| 3 | CIS-OCIMENE | | Essential -- Oil | -- | | Jim Duke's personal files. |
| 12 | COPPER | Plant | 20 | 20 | 0.6626022066114992 | Suzuki, A., Morimoto, I., and Okitsu, T., Elution of Metals from Crude Drugs, Shoykugaku Zasshi 36(3):190-195. |
| 0 | D-3-OCTANOL | Plant | -- | -- | | Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952. |
| 0 | DIOSMETIN-7-O-BETA-D-GLUCOSIDE | Shoot | -- | -- | | Jim Duke's personal files. |
| 0 | DL-ISOMENTHONE | Plant | -- | -- | | Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952. |
| 0 | EO | Plant | 10000 | 32100 | 1.699414490711653 | |

| Chemical Plant Part | | Low PPM | High PPM | StdDev | Reference | Citation |
|---------------------|---------------------|---------------|----------|--------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| 0 | EO | Plant | -- | -- | Duke, J. A. | Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705. |
| 0 | ETHYL-AMYL-CARBINOL | Plant | -- | -- | Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952. | |
| 76 | EUGENOL | Essential Oil | -- | -- | Jim Duke's personal files. | |
| 13 | FORMIC-ACID | Plant | -- | -- | Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952. | |
| 6 | FURFURAL | Plant | 2 | 5 | -0.4983416206388216 | Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952. |
| 11 | GAMMA-TERPINENE | Leaf | -- | 900 | 1.36337998309933 | |
| 11 | GAMMA-TERPINENE | Essential Oil | -- | -- | Jim Duke's personal files. | |

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|---------------------|--------------|------------|---------------------|--------|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| 2 | GERMACRENE-D | | Essential -- Oil | -- | | Jim Duke's personal files. |
| 2 | GERMACRENE-D | Leaf | 300 | 400 | -0.20129073177947823 | |
| 31 | HESPERIDIN | Plant | -- | -- | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 6 | IRON | Plant | 400 | 400 | -0.2672486162776693 | Suzuki, A., Morimoto, I., and Okitsu, T., Elution of Metals from Crude Drugs, Shoykugaku Zasshi 36(3):190-195. |
| 1 | ISOMENTHOL | | Essential -- Oil | -- | | Jim Duke's personal files. |
| 3 | ISOMENTHONE | Leaf | 300 | 600 | -0.4825959961896006 | |
| 3 | ISOPULEGOL | | Essential -- Oil | -- | | Jim Duke's personal files. |
| 4 | ISOPULEGONE | Leaf | 240 | 770 | -1.4142135623730947 | |

| Chemical Plant Part | | Low PPM | High PPM | StdDev | Reference | Citation |
|---------------------|-------------------|---------|----------|--------|--------------------|------------------------------------------------------------------------------------------------------------------------|
| 1 | ISOVALERALDEHYDE | Plant | -- | -- | | Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952. |
| 5 | ISOVALERIC-ACID | Plant | 30 | 90 | 1 | Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952. |
| 0 | KETONES | Plant | 336 | 1008 | | Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952. |
| 3 | L-MENTHOL | Plant | 373 | 29515 | | |
| 2 | L-MENTHYL-ACETATE | Plant | 85 | 4200 | | |
| 60 | LIMONENE | Leaf | 20 | 3520 | 3.2552582140948236 | |
| 0 | LINALOL | Leaf | -- | -- | | Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705. |

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|---------------------|------------------|---------|----------|--------|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| 0 | LINALOL-ACETATE | Leaf | 690 | 2215 | | Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705. |
| 53 | LINALOOL | Leaf | -- | -- | | Jim Duke's personal files. |
| 0 | LINALOOL-ACETATE | Leaf | 690 | 2215 | | |
| 78 | LUTEOLIN | Shoot | -- | -- | | Jim Duke's personal files. |
| 65 | MAGNESIUM | Plant | 2830 | 2830 | -0.38378745316107926 | Suzuki, A., Morimoto, I., and Okitsu, T., Elution of Metals from Crude Drugs, Shoykugaku Zasshi 36(3):190-195. |
| 14 | MANGANESE | Plant | 44 | 44 | -0.3795487464259209 | Suzuki, A., Morimoto, I., and Okitsu, T., Elution of Metals from Crude Drugs, Shoykugaku Zasshi 36(3):190-195. |
| 5 | MENTHOFURAN | Plant | 4200 | 12600 | 1.6912182092538641 | |

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|---------------------|-------------------|---------------|----------|--------|---------------------|----------------------------------------------------------------------------------------------------------------------------|
| 0 | MENTHOFUROLACTONE | Plant | -- | -- | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 63 | MENTHOL | Leaf | 1000 | 24385 | 2.2215192266445816 | |
| 0 | MENTHOL-ACETATE | Leaf | 60 | 2215 | 1 | |
| 30 | MENTHONE | Leaf | 250 | 25680 | 2.6118994892791703 | |
| 30 | MENTHONE | Plant | 71 | 24000 | 3.4108177532842308 | |
| 0 | MENTHONONE | Plant | -- | -- | | Chemical Constituents of Oriental Herbs (3 diff. books) |
| 22 | MYRCENE | Leaf | 10 | 2485 | 0.7240430590989703 | |
| 0 | NEOISOMENTHOL | Essential Oil | -- | -- | | Jim Duke's personal files. |
| 0 | NEOISOPULEGONE | Essential Oil | -- | -- | | Jim Duke's personal files. |
| 0 | OCTAN-3-OL | Leaf | -- | 10200 | 2.4424856936312707 | |
| 16 | P-CYMENE | Leaf | 9 | 29 | -0.3760203807398916 | |
| 0 | P-CYMOL | Leaf | 562 | 1800 | 0.1584093813492088 | |

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|---------------------|--------------------------|------------|-------------|--------|----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| 0 | P-MENTHAN-TRANS-2,5-DIOL | Plant | -- | -- | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. | |
| 3 | PIPERITENONE | Plant | -- | -- | Chemical Constituents of Oriental Herbs (3 diff. books) | |
| 2 | PIPERITENONE-OXIDE | Leaf | 260 | 7320 | 0.8759003813049827 | |
| 7 | PIPERITONE | Leaf | 240 | 7700 | 3.6970310693516097 | Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705. |
| 7 | PIPERITONE | Leaf | 13 | 1285 | 0.3195633749094698 | |
| 0 | PIPERITONE-OXIDE | Leaf | 320 | 5135 | 0.5008838193806822 | |

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|---------------------|------------------|------------|-------------|--------|--------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| 0 | PIPERITONE-OXIDE | Plant | -- | -- | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. | |
| 14 | POTASSIUM | Plant | 35100 | 35100 | 0.9277235520248976 | Suzuki, A., Morimoto, I., and Okitsu, T., Elution of Metals from Crude Drugs, Shoykugaku Zasshi 36(3):190-195. |
| 28 | PULEGONE | Plant | 100 | 24960 | 2.11770459496291 | |
| 1 | RAFFINOSE | Plant | -- | -- | Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980. | |

| Chemical Plant Part | | | Low PPM | High PPM | StdDev | Reference | Citation |
|---------------------|------------------|--|---------|----------|--------|-----------------------|--------------------------------------------------------------------------------------------------------------------------------|
| 0 | RESIN | | Plant | -- | -- | | Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980. |
| 57 | ROSMARINIC-ACID | | Leaf | 71 | 228 | -0.9802701242157968 | |
| 57 | ROSMARINIC-ACID | | Plant | 28000 | 28000 | -0.022447952153288788 | Fitoterapia No.62: 166. |
| 0 | SABINENE-HYDRATE | | Leaf | 30 | 160 | -0.3730620025303552 | |
| 0 | SANTENE | | Plant | -- | -- | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | SH | | Plant | -- | -- | | |
| 1 | SODIUM | | Plant | 860 | 860 | -0.25647164723432153 | Suzuki, A., Morimoto, I., and Okitsu, T., Elution of Metals from Crude Drugs, Shoykugaku Zasshi 36(3):190-195. |

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|---------------------|-------------------|---------------|----------|--------|-------------------------------|-------------------------------------------------------------------------------------------------------------------|
| 1 | STACHYOSE | Plant | -- | -- | Leung, A.Y., | Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980. |
| 35 | TANNIN | Plant | -- | -- | Leung, A.Y., | Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980. |
| 17 | THUJONE | Plant | -- | -- | List, P.H. and Horhammer, L., | Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | TRANS-ISOPULEGONE | Leaf | -- | -- | Jim Duke's personal files. | |
| 0 | TRANS-OCIMENE | Essential Oil | -- | -- | Jim Duke's personal files. | |

| Chemical Plant Part | | Low PPM | High PPM | StdDev | Reference | Citation |
|---------------------|------|------------|-------------|--------|----------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| 77 | ZINC | Plant | 28 | 28 | -0.23812799612849617 | Suzuki, A., Morimoto, I., and Okitsu, T., Elution of Metals from Crude Drugs, Shoykugaku Zasshi 36(3):190-195. |